

Translation of Reference 3 (JP-A-09-091303)

(54) Title of Invention: DATA MANAGEMENT DEVICE

(57) Abstract:

PROBLEM TO BE SOLVED: A subject of the present invention is to provide a data management device which decreases the amount of information stored in an index table, and can shorten the retrieval time of data.

SOLUTION: A data management device of the present invention is equipped with a data part which stores data and discrimination information, hash converting means which converts the discrimination information into a hash value, a 1st index table which consists of blocks which store hash values, discrimination information, and storage positions, a 2nd index table which contains the hash values used as indexes of respective blocks, and retrieval means which converts the discrimination information into the hash value, specifies the block containing the hash value with comparing the magnitude of hash value in the 2nd index table, retrieves the hash value contained in the 1st index table, specifies an object to be retrieved by contrasting the discrimination information belonging to this hash value, and retrieves corresponding data with the discrimination information concerned.

[Claim]

[Claim 1]

A data management device, comprising:

a data part which contains a plurality of data and discrimination information for retrieval corresponding to this data;

hash converting means which converts the discrimination information into a hash value shorter than bit length of the discrimination information according to a hash function;

a 1st index table which consists of a plurality of blocks which contains hash value groups in which the hash values converted by the hash converting means are compiled in a plurality of predetermined ranges, discrimination information corresponding to this hash value group, and storage positions of this discrimination information in the data part;

a 2nd index table which contains hash values contained in heads of respective blocks in the 1st index table, and storage positions of this hash value in the 1st index table; and

retrieval means which converts the discrimination information, inputted at the time of data retrieval, into a hash value, specifies a block in the 1st index table where the same hash value is contained by comparing the magnitude of this hash value with the magnitude of each hash value contained in the 2nd index table, retrieves the same hash value in the block, specifies the same discrimination information as an object to be retrieved by contrasting the discrimination information corresponding to the retrieved hash value with the discrimination information inputted for retrieval, and retrieves corresponding data from the data part with this discrimination information.